



Confined Space Operations

Scope: Sacramento Regional Fire Departments

Policy Contact

Regional SOG Chair- Assistant Chief Quinn (SAC)
Regional SOG Vice Chair- Battalion Chief Hubbard (CSM)
Regional SOG Secretary- Engineer Henkens (CSM)
Operations Chief Chair- Deputy Chief Bridge (SAC)
Operations Vice Chair- Deputy Chief McLaughlin (CSM)

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References

- US Department of Labor. 2011. *Code of Federal Regulations*. Title 29. Permit-Required Confined Space
- Department of Industrial Relations. 2015. *California Code of Regulations*. Title 8. General Industry Safety Orders #5156, 5157 and 5158
- Office of the State Fire Marshal. California State Fire Training. *Confined Space Rescue Technician*. 2008
- National Fire Protection Association 1670. *Standard on Operations and Training for Technical Search and Rescue*. 2014
- National Fire Protection Association 1006. *Standard for Technical Rescuer Professional Qualifications*. 2013

01. Guideline

Establish operational procedures for operating in a permit-required confined space

02. Definition

2.1 Confined Space

Defined by law as an area that meets all of the following criteria:

- Large enough for employees to physically enter and perform assigned work

- Has limited or restricted entry/egress
- Not designed for continuous employee occupancy

2.2 Permit-Required Confined Space

Defined by law as area that meets the criteria of a confined space with the addition of any one of the following:

- Presence or potential presence hazardous atmosphere
- Presence of engulfment hazard
- Container shaped such that entrants may be trapped/asphyxiated and tapers to a smaller cross-section
- Possesses other recognized serious health and/or safety hazards

03. Training Requirements

- Confined Space Awareness Level compliant with NFPA 1670
- Adequate personnel and equipment to affect a permit-required confined space rescue as defined in the Urban Search and Rescue Operational System Description ICS-USAR-120-1
- Members filling positions of entry group supervisor, attendant or entrant must possess an SFT FSTEP certificate as a Confined Space Technician and have documented participation in an annual confined space drill as one of the four mandated positions (entry group supervisor, attendant, entrant and/or back up)

04. Procedures

4.1 First-Due Actions

The following guidelines are to be used for strategic and tactical priorities during confined space rescue operations:

- Establish command
- Implement site control and scene management [NFPA 1670 7.2.4(7)]
- Recognize potential for a confined space rescue and request additional resources as needed [NFPA 1670 7.2.4(2)]
- Initiate contact and establish communications with victims when possible [NFPA 1670 7.2.4(3)]
- Recognize and identify the hazards associated with non-entry confined space emergencies [NFPA 1670 7.2.4(3)]
- Perform non-entry retrieval [NFPA 1670 7.2.4(5)]
- Begin atmospheric monitoring when available
- Increase survivability profile, i.e. create a micro-climate around victim; ventilate the area, etc.

4.2 Rescue Company Operations

Check in with command and confirm/determine whether the operational strategy is one of rescue or recovery. If a confined space entry is performed the following guidelines shall be followed:

- Complete a confined space entry permit (Regional Confined Space Entry Permit)
- Initiate pre-entry atmospheric monitoring and ventilation as soon as possible
- Assess and improve survivability profile
- Secure all energy sources via lock-out/tag-out prior to entry
- Establish primary and secondary communication systems
- Fill the following positions as soon as possible: rescue/entry group supervisor, assistant safety officer (rescue), air supply group, etc.
- Conduct a pre-entry safety briefing prior to confined space entry
- Safety briefings should at minimum include: rescue/entry group supervisor, safety officer, attendant, entrant and back-up entrant

4.3 PPE

Individual departments, as well as incident-specific hazards-, may dictate the use of safety gear beyond the minimum. The minimum required PPE shall be:

- Helmet
- Long sleeve shirt and pants
- Work gloves
- Steel-toe/ shank boots

Sacramento Regional Fire Department

Confined Space Entry Permit

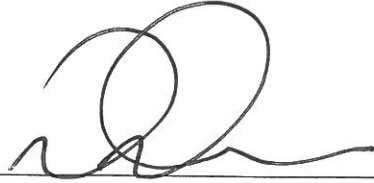
INCIDENT INFORMATION					
START DATE:		START TIME:		TERMINATION DATE:	
INCIDENT#:			LOCATION:		
CONTACT PERSON:			SPACE USED FOR:		
NUMBER OF VICTIMS:			TIME LAST SEEN:		
HAZARDS IN SPACE					
ATMOSPHERIC		PHYSICAL / MECHANICAL		ENVIRONMENTAL	
<input type="checkbox"/> Oxygen Deficient <input type="checkbox"/> Oxygen Enrichment <input type="checkbox"/> Explosive <input type="checkbox"/> Toxic		<input type="checkbox"/> Engulfment <input type="checkbox"/> Entrapment		<input type="checkbox"/> Corrosive <input type="checkbox"/> Temperature <input type="checkbox"/> Biological <input type="checkbox"/> Radiation	
				PHYSIOLOGICAL <input type="checkbox"/> Fatigue <input type="checkbox"/> High Noise Levels	
<input type="checkbox"/> RESCUE <input type="checkbox"/> RECOVERY (Acceptable Entry Conditions For Recovery 19.5 – 23.5% O ₂ / < 10% LEL / < 10 PPM H ₂ S / < 25 PPM CO)					
HAZARD CONTROL					
VENTILATION		ELECTRICAL		MECHANICAL	
<input type="checkbox"/> Natural <input type="checkbox"/> Supply <input type="checkbox"/> Exhaust <input type="checkbox"/> Local Supply <input type="checkbox"/> Local Exhaust <input type="checkbox"/> Combination		<input type="checkbox"/> Lock-Out / Tag-Out <input type="checkbox"/> Disconnect PNEUMATIC <input type="checkbox"/> Lock-Out / Tag-Out <input type="checkbox"/> Disconnect		<input type="checkbox"/> Lock-Out / Tag-Out <input type="checkbox"/> Disconnect <input type="checkbox"/> Block Open <input type="checkbox"/> Release Stored Energy	
				PIPES / DUCTS <input type="checkbox"/> Blanking / Blinding <input type="checkbox"/> Disconnect HYDRAULIC <input type="checkbox"/> Lock-Out / Tag-Out <input type="checkbox"/> Disconnect	
				IGNITION PREVENTION <input type="checkbox"/> Explosion Proof <input type="checkbox"/> Intrinsically Safe PHYSIOLOGICAL <input type="checkbox"/> Medical Monitoring	
EQUIPMENT REQUIRED					
PPE		COMMUNICATION X 2		ENTRY AND EXTRICATION	
<input type="checkbox"/> Flash Protection <input type="checkbox"/> Chemical Protection		<input type="checkbox"/> Voice <input type="checkbox"/> Visual / Hand <input type="checkbox"/> Tapping / Rapping / OATH <input type="checkbox"/> Rope / OATH <input type="checkbox"/> Radio Channel: _____ <input type="checkbox"/> Hardwire		<input type="checkbox"/> Atmospheric Monitor <input type="checkbox"/> PASS <input type="checkbox"/> High Directional <input type="checkbox"/> Rope M/A <input type="checkbox"/> Winch <input type="checkbox"/> Harness	
RESPIRATORY PROTECTION <input type="checkbox"/> SCBA <input type="checkbox"/> SABA				LIGHTING X 2 <input type="checkbox"/> Light Stick <input type="checkbox"/> Headlamp <input type="checkbox"/> Hand Light <input type="checkbox"/> Cord Light <input type="checkbox"/> Safety / Retrieval <input type="checkbox"/> Wristlets	
				VICTIM PACKAGING <input type="checkbox"/> Backboard <input type="checkbox"/> Litter <input type="checkbox"/> SKED <input type="checkbox"/> Halfback <input type="checkbox"/> Harness <input type="checkbox"/> PPE / Respiratory Protection	

Signature Page

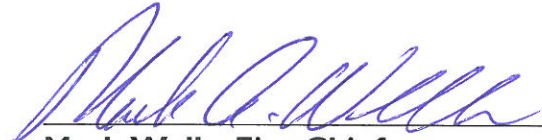
The undersigned Fire Chiefs approve the contents of this document



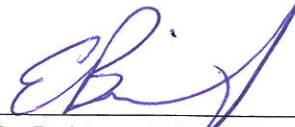
Tracey Hansen, Fire Chief
Cosumnes Fire Department



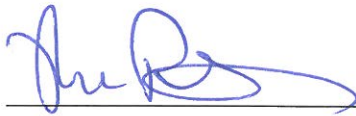
Mike McLaughlin, D/C of Operations
Cosumnes Fire Department



Mark Wells, Fire Chief
Sacramento Metro Fire District



Eric Bridge, D/C of Operations
Sacramento Metro Fire District



Ron Phillips, Fire Chief
City of Folsom Fire Department



Dennis Wycoff, D/C of Operations
City of Folsom Fire Department



Walt White, Fire Chief
Sacramento Fire Department



Niko King, D/C of Operations
Sacramento Fire Department